

myKWS MAIZE

NEWSLETTER | ISSUE 8 | SUMMER 2021

SEEDING
THE FUTURE
SINCE 1856



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myKWS

Benefit from our free online tools – Heat Unit Tool and Field Vitality Check

Hello...

...and welcome to the myKWS quarterly newsletter. This series offers you topical advice and information on maize, to help you make the most of your crop.

In this issue, we reflect on the late start to the season and discuss how it might affect harvest results, as well as focusing on eyespot and how to tackle it. We also shine a spotlight on our new, flagship variety, Debalto, and hear from a grower about the benefits of Perez KWS and how it fits into his system.

PROSPECTS FOR THIS YEAR'S MAIZE CROP

JOHN BURGESS, KWS

Low temperatures at the start of the season are likely to mean that maize yield and quality will dip slightly, compared with the past few years.


Overall, we lost an estimated 4-5 weeks off the standard growing season, with some varieties that should have been drilled by 15 April not sown until a full month later. By mid-May, our online KWS Heat Units Service was showing that heat unit numbers had fallen about 15% below the five-year average for the period.

Unfortunately, it will not be possible for the crop to fully catch up unless we experience a tremendous heat wave in the weeks ahead. The growth check mainly occurred during the three-to-six week stage, which is crucial to plant development. It is the time when maize should be getting up and away, but instead it remained in a partially vegetative state.

It is important to keep the season in perspective, however. There is a tendency to compare 2021 with the near-perfect maize growing conditions that we have seen in recent times. The prospects are still fairly upbeat, but nevertheless we have witnessed an unusual weather pattern.

The weather effect is expected to reduce crop height across all varieties, due to the lack of heat units and the influence of maturity stress. It could also lead to some purpling, which is a sign of phosphate deficiency. A foliar nutrient treatment containing phosphate and zinc will make little or no difference, as the issue is related to maturity.

The majority of crops will also have a high grain:stover ratio. This is generally a positive feature and should allow for a degree of catch up. The low heat unit numbers could limit starch development, with a knock-on effect on maize silage ME values, while freshweight yields could also suffer due to the crop's sub-optimal development cycle.

It is too early to accurately predict how these factors will affect harvesting schedules, but I would not be surprised if the delayed drilling is followed by a relatively late harvest date. 



John Burgess



MAIZE HARVEST ADVICE

As cutting is probably going to be delayed, it will be important to exercise patience at harvest time, which is really not that far away.

This applies mainly to the later hybrids, as they require additional days to reach maturity, compared with earlier types. If maize is cut before it is fully mature, both yield and quality will be compromised and varieties will not achieve their potential. I have summarised the main points here:

EFFECTS OF HARVESTING TOO EARLY

- Higher 'bottom end' yield – early varieties tend to express maximum potential
- Lower 'top end' yield – the yield curve will plateau as later varieties fail to mature
- DM% differences tend to truncate across all maturities
- Dilute ME content (MJ/Kg) and starch %
- Increased ADF (acid detergent fibre) %, owing to more acidic silage
- High sugar content

2021 MAIZE TRIAL RESULTS PREDICTION

The slow start I have already mentioned looks set to influence this year's trial crop results in favour of early varieties.

Given the late-sowing scenario, the on-farm response would be to reduce seed rates, thereby maximising the available light accessible to individual plants and helping to boost production. However the NIAB trials protocol prevents this approach, stipulating that all varieties must be sown at the standard recommended seed rate. This restriction will push back maturity dates, potentially favouring earlier varieties which require fewer days to ripen. In addition, later hybrids do not tend to cope well with postponed drilling and may suffer a small yield penalty. 🧑🏻



SEND US YOUR PICS

KWS are building a maize community to share ideas and life on the farm.

We would love to see and share your photos and videos – of both the fun and serious sides to farming. You can tag us in your own posts @ **kwsukltd** on Instagram and Twitter or find us on **Facebook.com/KWSUKltd**.

We would also really like to share your experiences on our own channels, you can email your pics to us, along with a bit of info, to maize@kws-uk.com. We look forward seeing them!



FARM CASE STUDY

PEREZ KWS

SPRINGHILL FARMS, WORCESTERSHIRE

PEREZ KWS



Available exclusively through D.L.F. Seeds

Ultra-early variety (FAO 160)

Suitable for AD or forage

Good early vigour and high DM yield

Early harvest potential

Excellent starch content (average 34.1%)

Perez KWS is the first-choice early-maturing maize variety for Springhill Farms, and it is supplied by Julian Godwin of Foxley Farm Seeds. Some 1,700 acres of maize have been planted this year and they will also buy in crop from other growers. Maize is used to fuel the on-site AD plant, which sells biogas to the National Grid.

Perez KWS has been grown at Springhill for the past seven years, but its acreage has increased since Nick Reynolds took over as farm manager three years ago, he explains.

“When I arrived we had 11 different maize varieties and I felt this approach was too complicated,” says Mr Reynolds. “I have consolidated the range into just half a dozen varieties, although that is perhaps still too many.

“Perez remained because it was the best performer in its category. It shows vigorous early growth and, more importantly, it is consistent. The farm has a wide range of soil types; some of which occur within the same field. The range goes from a light sand to a heavy marl and Perez will produce a good crop across the board.”



Nick Reynolds

“Our yield target is set at 37 tonnes/ha. In general, yields do not fall into the top level from a national perspective, as the farm is not situated in the best area for maize-growing. Therefore seed cost has to be included in the decision-making process. Perez is an older variety but it suits the farm, so we will stick with it,” he says.


While yield is important, maize quality has a significant effect on gas yields, he comments.

“High-starch maize feedstock produces a better quality gas. There is a small laboratory on-site which is used to analyse the crop, but we are looking into ways of speeding up the testing process. This will allow us to reward growers who supply us with best quality maize silage. At the same time, we also need high yields to keep the plant running, so it is a question of balancing the two characteristics when selecting varieties.”

Maize drilling presented a challenge on the majority of holdings this season, due to the low temperatures

and prolonged rainfall. Springhill was no exception.

“The drilling window was split into two distinct sections this year,” says Mr Reynolds. “The later-maturing varieties are normally drilled first and as an ultra-early, Perez is usually sown last. In a standard growing season, the aim is to have all of the maize seed in the ground by 20 May. This year, sowing began on 20 April and the maize went into a fairly dry seedbed. Progress was then halted by heavy rainfall and the drills did not come out again until 21 May. This meant that we had to order additional Perez seed; due to the late planting we needed a variety that would require fewer days in order to reach maturity.

“Harvest will inevitably finish later than the traditional date of 20 October this year, although the early-drilled crops should be ready on time and cutting should begin as usual in mid-September. Hopefully the delay will not be an issue, as a spread of harvest dates is required, due to the large acreage of maize that is grown at Springhill,” he says. 

DEBALTO BREEDER'S REVIEW

DEBALTO

JOHN BURGESS, KWS



DEBALTO



Early variety (FAO 170)

19.8 t/ha yield average

32.6% starch

11.39 ME


Debalto is a new-generation hybrid from KWS that has been specifically selected for its superb standing ability; a trait which is a principle focus from recent trials and growing seasons.

It also delivers tremendous production, being ranked in the National List in the top two yield placings alongside KWS Exelon. Both of these varieties will beat their nearest rivals by 3-4 t/ha in terms of dry matter yield.

The variety, which was entered in NL trials in 2019, is intended to replace Perez KWS, which has been the first choice for farmers around the country for a number of years. Debalto has all of the older variety's positive qualities, but is enhanced by its increased yield potential and greater in-field stability. Like KWS Exelon, Debalto's standing power is enhanced by its lower ear insertion height, which moves the weight closer to the root anchor. This

trait has been developed by KWS in response to the winter storms which seem to have become a regular a feature of the growing season.

In a forage situation, Debalto is ideal for 50-70% inclusion in a dairy cow TMR, or for finishing beef cattle. It can also be used for CCM or grain maize, giving the variety flexibility over some of its counterparts.

Debalto's energy-dense properties are achieved by its high grain:stover ratio and it also has very good early vigour. Seed is available exclusively from DLF UK. It sold out quickly in 2021, but seed production has been ramped up, to meet the anticipated demand for 2022. 

DISEASE ALERT

EYESPOT

(KABATIELLA ZEAE)

DISEASE FACTS

- Early infestation (8-leaf stage onward)
- Symptoms only appear at an advanced vegetative stage
- Spores on contaminated leaves are spread by the wind
- Favours cold temperatures

Management:

- Choose varieties which are robust and suited to the region
- Ensure stubble is finely chopped and incorporated into soil
- If the disease appears early and around 30% of the plants are affected, use a fungicide programme containing triazoles and/or strobilurins. 🧑🌾



? DID YOU KNOW?

"A rise in the national maize acreage has increased the risk of eyespot and other maize diseases."

John Burgess, KWS

TACKLING MAIZE DISEASES

ANDREW CLUNE, BASF

Try to select disease-resistant varieties (treatment options limited by product withdrawals)

OPERA

- Opera (epoxiconazole) purchases before 31 October 2020 have 12 months for utilisation
- Few producers have Opera on farm

COMET 200

- Only alternative to tackle eyespot is Comet 200 (pyraclostrobin) – use at tasselling stage
- No threshold level for Comet 200 as it is preventative in action
- Apply Comet 200 routinely, due to risk of high crop losses in cases of infection
- The product also has a stay-green effect, potentially boosting yields by an average 9%



Andrew Clune

? DID YOU KNOW?

"Common smut in maize is hard to combat. The main options are to bury trash and weigh up the benefits of coming out of continuous maize production".

Andrew Clune, BASF

For detailed maize disease information (and all aspects of agronomy), download our free Maize Field Guide. **Find it at www.kws-uk.com** (select the maize option).

MAIZE INFORMATION HUB

myKWS

Sign up to myKWS to access free online tools specifically designed to help you to maximise your maize crop's potential.

Use the Heat Unit Tool and Field Vitality Check to monitor your crops during the growing season.

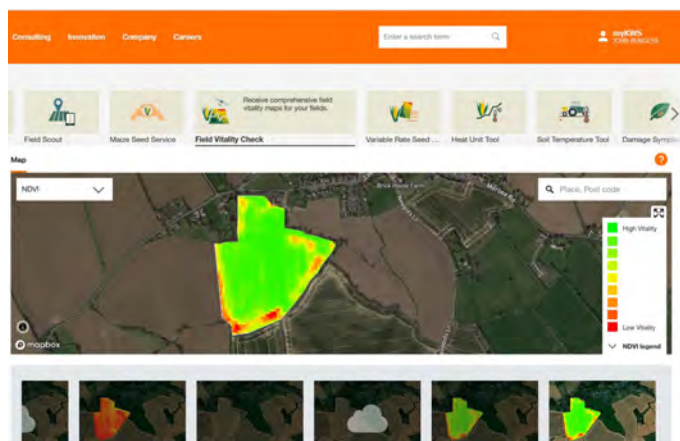
HEAT UNIT TOOL

- User-friendly tool provides information on your likely harvest start date
- Available from Apr-Oct to check maize performance on your farm
- Uses local meteorological data to monitor crop progress against 10-year mean
- Calculates real-time heat unit numbers (updated weekly)
- Assess varietal harvest dates, according to maturity rating or FAO.

How to use the Maize Heat Units Tool

- Enter your full UK postcode
- Enter your sowing date
- Your predicted harvest date will be shown

**The calculation is based on the crop reaching a grain kernel moisture content of 35% and using the five-year average (actual harvest date is about 3-4 weeks before this, depending on ripening conditions)*



FIELD VITALITY CHECK

Farmers can use the NDVI field vitality tool to quickly assess areas of crop damage or suspected field problems. Draw in the field to access the NDVI information. Key issues that can be identified remotely using the tool are:

Early season (May to July)

- Herbicide damage
- Nutrient deficiency (typically nitrogen or phosphate)
- Compaction (Normally surrounding field headlands)
- Drought stress

Late season (August to October)

Key issues can be identified remotely using the tool

- Eyespot or NCLB disease spread
- Lodging / stem breakage
- Dry down / over ripening

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Sign up for myKWS at www.kws-uk.com (select the maize option)

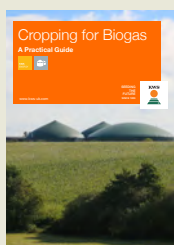
Our KWS Maize publications...



Maize Best Practice
Growing and Agronomy Guide



Maize Best Practice
Ensiling, Feeding and Nutrition



Cropping for Biogas
A Practical Guide



Maize Field Guide
Maize Crop Development, Pests & Diseases

KWS has published a wide range of free, up-to-date information on maize, including advice on all aspects of agronomy, clamp management, livestock feeding and crops for AD. All of the booklets are available online and some can be sent to you as paper copies by post.

Order your copies by emailing the office at maize@kws-uk.com or go to www.kws-uk.com click on the maize option to find and download.

OPEN DURING SEPTEMBER



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